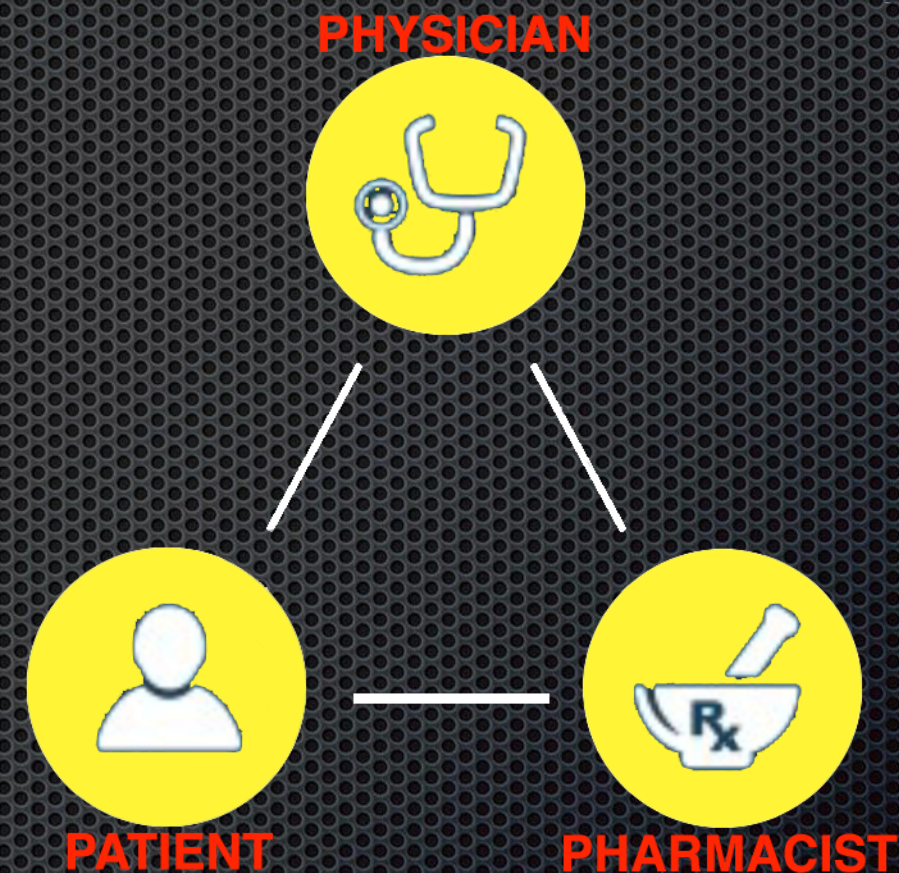


The workings of transdermal pain creams at a community pharmacy.

Mark Hanus, RPh

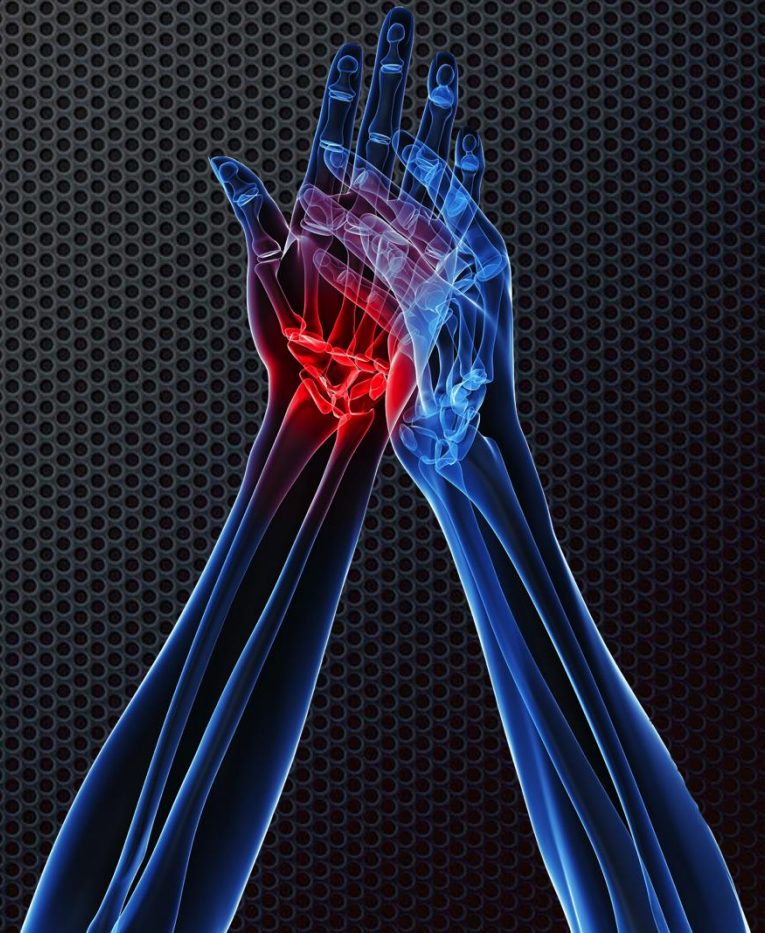
Where do our prescriptions come from?

- Prescribers
- Patient consultations
- Word of mouth



Common conditions treated

- **Acute Pain**
- **Chronic Pain**
 - ◆ Inflammatory
 - ◆ Neuropathic
 - ◆ Idiopathic



How are creams formulated?

- It begins with a good conversation with the practitioner and patient.
- What is the cause of the pain?
- Describe the pain (burning, tingling, shooting).
- Evaluate history of medications for both positive outcomes and failures.

**API + BASE + APPLICATION
RATE**



API's

Active Pharmaceutical Ingredients

➤ CONCENTRATION

➤ TITRATION OF DOSE

Drug	%	Daily topical Dose of 8 grams	Max Oral Dose daily
Lidocaine	3%	240mg	300mg Topical
Topiramate	2%	160mg	400mg
Amitriptyline	2%	160mg	300mg
Diclofenac	3%	240mg	320mg Topical
Gabapentin	6%	720mg	2400mg
Ketamine	5-10%	800mg	1000mg

Application Rates

Formula calculations are based daily use.

**1-2 GRAMS APPLIED TO AFFECTED AREA(S) 2-4 TIMES
DAILY 240 GRAMS = 30 DAY SUPPLY**

Minimum amount needed to be effective seems
to be 1 gram twice daily to a single area.

**1 GRAM APPLIED TO AFFECTED AREA 2-3 TIMES DAY
60 GRAMS = 20-30 DAY SUPPLY**

Method of delivery

- Metered dose pump
- Metered dose clickers
- Microdose Pens



0.1g per click



0.25g – 1.5g per pump



0.25g per click

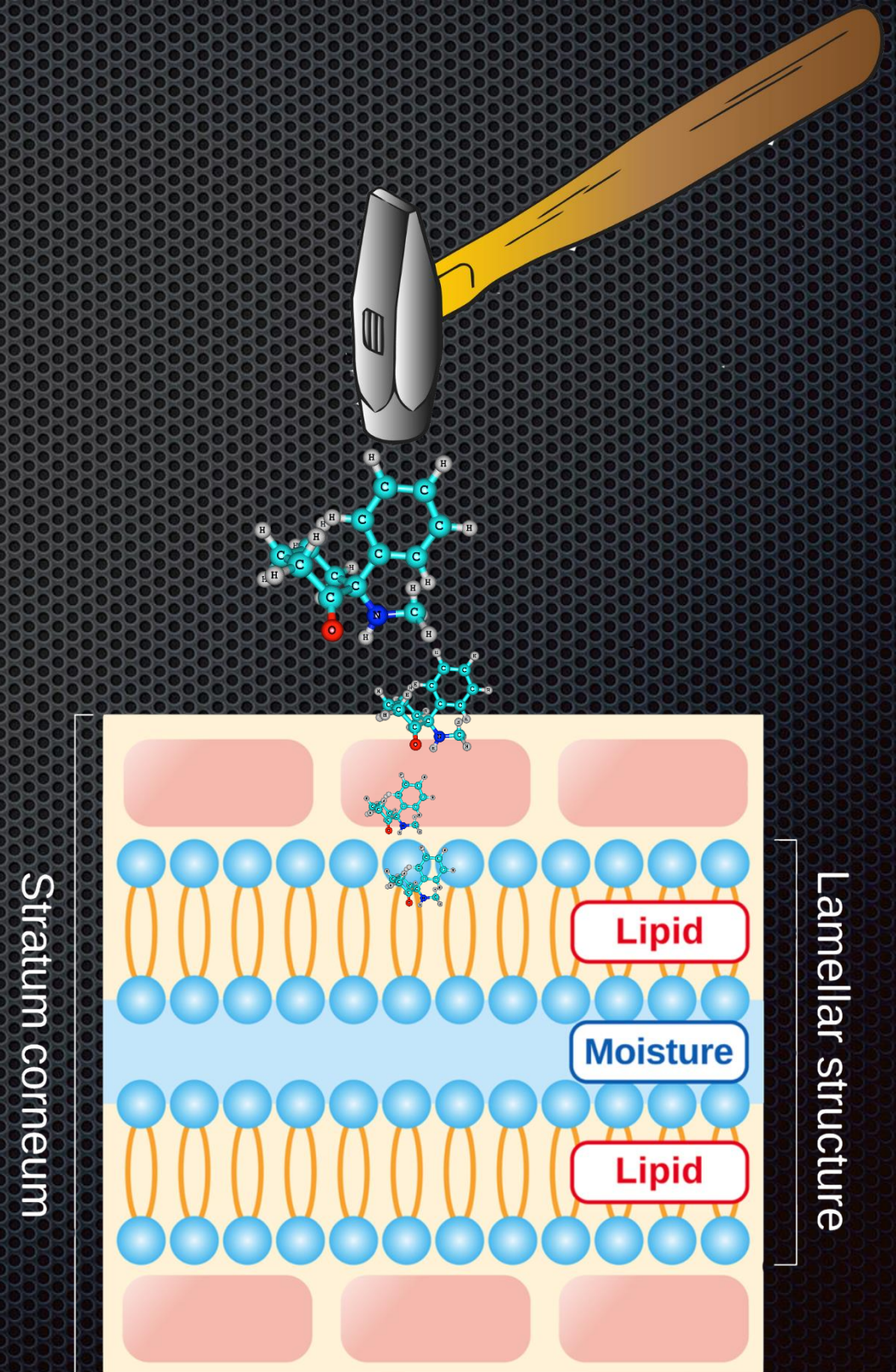
Most common formulations

- Anti-inflammatory + Neuropathic + Topical Anesthetic
- Neuropathic + Topical Anesthetic
- Combination of topical anesthetics
 - . Needle sticks
 - . Laser treatments
- Dental gels

Base selection

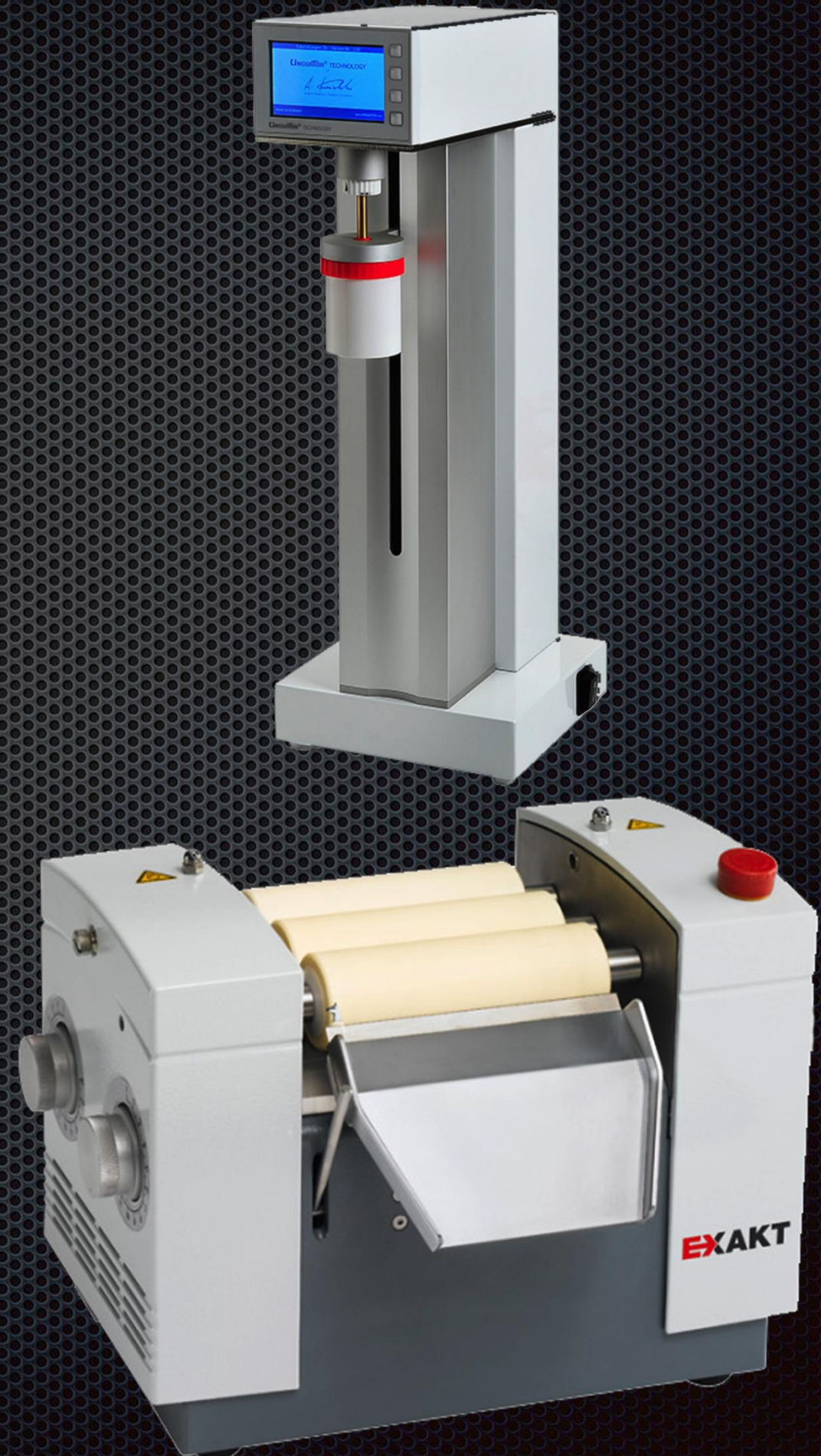
Application site & API'S determine base

- Bases (creams, gels, lotions)
 - Low % API delivery
- Transdermal bases
 - High % API delivery
 - Multiple API delivery



Enhancements

- Transdermal base selection
- Use of wetting agents
- Lab procedures
- Variety of available studies



Prevention of errors in formulations

- “The Clinical Team”
- Master formulations
- Numbered lots created from master formulation
- Prescriptions are assigned numbered lots
- All formulations are checked by a pharmacist

Prevention of errors in the laboratory

- Testing
- Technician certification
- Bar coding and scale linking
- “QA” performed on all dosage forms
- All compounds are final checked by a pharmacist

Patient counseling points

- Site of application
- Amount to apply
- Area to cover
- Duration
- Realistic expectations
- Side effects
- Safe storage



Methods of payment

- Insurance - Ruined by abusers
- Cash
- Work with patient

Patient Outcomes

- My best outcome
- End stage renal disease patient
- Knee patient
- Back patient